

BOTANICAL EXPLORATION OF EAST GIPPSLAND

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Abstract

The paper summarizes the botanical exploration which added to the known flora of Victoria the species of vascular plants, approximately 200 in number, which in this state are restricted in distribution to East Gippsland. Details are given of the original authentic Victorian record of most of these species. The principal articles and papers which have dealt with East Gippsland vegetation are noted.

Introduction

Approximately 1,400 species of vascular plants are native in East Gippsland, and about 14 per cent of these do not occur elsewhere in Victoria. Amongst the species which in Victoria are confined to East Gippsland are these groups:

1. Over 30 species belonging to near-coastal heathlands and sedge-flats. Most of these species do not occur W. of the mouth of the Snowy R., but there are a few in the Providencce Ponds area to the W. of the Gippsland Lakes.

2. About 40 species belonging essentially to the warm-temperate rain-forests. This formation occurs along streams at low elevations, mainly from the lower Snowy R. eastward but with outliers as far W. as the Mitchell R. gorges NW. of Bairnsdale.

3. About 30 species on rock outcrops, mainly of the Cann River-Genoa area.

4. About ten species in dry rain-shadow areas of the upper (Victorian) Snowy R. valley.

5. About ten sub-alpine species.

6. A number of species, some widespread and some localized, in lowland dry sclerophyll forest areas.

This paper summarizes the botanical exploration which added these East Gippsland plants to the known flora of Victoria. A few typically East Gippsland species, which extend to South Gippsland, are included in the summary. Almost all the records of plants, noted in this paper, have been verified by study of the specimens concerned in the collections of the National Herbarium of Victoria. In particular, this source of reference has provided the basis for statements that certain species were collected but not recorded in the references cited.

During his term as Government Botanist of Victoria, Baron Sir Ferdinand von Mueller included in his published lists of native Victorian plants many species which had not, in fact, been discovered in this State. In some cases this was the result of errors in identification, but it was due mainly to the policy of recording as Victorian any species which had been collected near the boundaries of the State. Many of the species concerned have since been found in Victoria. Premature and erroneous records which concern the East Gippsland flora have been studied elsewhere (Wakefield, 1952). In the present paper, species which had been recorded prematurely, before their actual first discovery in Victoria, are marked with an asterisk.

Ferdinand Mueller, 1853-1861

Mueller made a number of journeys in Victoria, on four of which he came in contact with East Gippsland vegetation. Results of the first three journeys are embodied in general reports to the Victorian Government, to which are appended the first, second and third systematic lists of Victorian plants (Mueller, 1853, 1854, 1855). The other report concerning East Gippsland was accompanied by the sixth systematic list (Mueller, 1861). In the following summary, unless it is indicated otherwise, all observations and species mentioned in connection with Mueller's first, second and third journeys and that of 1860, appeared in the corresponding reports and lists. The generic and specific names in parenthesis are names used by Mueller in his various publications, and they may indicate synonyms (including *nomina nuda*) or errors in identification.

In Mueller's first general report, in September 1853, he mentioned journeying 'along the LaTrobe River', and 'several weeks travelling in the neighbourhood of Port Albert, and many excursions through Wilson's Promontory'. He collected *Gompholobium latifolium* from the Latrobe and *Banksia serrata* from the coast. He also collected *Eugenia smithii* (*Acmaena floribunda*), *Pittosporum undulatum*, *Elaeocarpus reticulatus* (*cyaneus*) and *Leptorhynchus linearis* (*nitidulus*), which four appeared in the second systematic list.

In February 1854, Mueller ascended the Cobberas Mountains and collected a number of previously unknown species and varieties of vascular plants. As a result, the Cobberas became the type locality of the following:

- Hierochloe submutica* F. Muell.
- Agrostis muelleriana* J. Vickery (*A. gelida* F. Muell.)
- Scleranthus singuliflorus* F. Muell. (*Mniarum*)
- Phebalium phyllicifolium* F. Muell. (*Eriostemon phyllicoides*)
- Asterolasia trymalioides* F. Muell. (*Eriostemon*)
- Pimelea alpina* F. Muell.
- Pimelea curviflora* var. *alpina* F. Muell. (= *P. biflora* N. A. Wakefield)
- Oschatzia cuneifolia* (F. Muell.) Druce (*Centella*, *Azorella*)
- Seseli harveyanum* F. Muell.
- Aciphylla simplicifolia* F. Muell. (*Anisotome*)
- Pratia puberula* F. Muell.
- Leucopogon macraei* F. Muell.
- Olearia alpicola* F. Muell. (*Eurybia*)
- Olearia megaphylla* F. Muell. (*Eurybia*)
- Brachycome nivalis* F. Muell.
- Helichrysum secundiflorum* N. A. Wakefield (*Ozothamnus planifolius*)
- Ewartia nubigena* (F. Muell.) Beauv. (*Antennaria*)
- Gnaphalium unbricola* J. H. Willis (*G. alpigenum* F. Muell.)

After his visit to the Cobberas, and a north-easterly excursion to the New South Wales tract of the Snowy River, Mueller returned to Omeo and from there proceeded down the Tambo River valley and then easterly to the Orbost district, which he noted as 'the most southerly locality in which palms exist in the Australian continent'. He described the flora of the lower Snowy River in these terms:

The vegetation here assumes entirely a tropical character, with all its shady groves of trees producing dark horizontal foliage, with all those impenetrable thickets and intricate masses of parasites and climbers over running the highest trees, and with so many typical forms never or but rarely transgressing the torrid zone. The occurrence of so many plants of a really tropical type, bears a sufficient testimony not only to the geniality of the climate but also to

the capability of the soil in the district. Transitions to the flora of New South Wales were here perceptible everywhere.

On this occasion, about the lower Snowy and Brodribb River, Mueller collected the following:

Sarcopetalum (*Cocculus*) *harveyanum*, *Cissus hypoglauca* (*australasica*), *Celastrus australis*, *Pultenaea retusa*, *Kennedia rubicunda*, *Rubus rosaefolius* (*eglantiera*), *Eucalyptus botryoides*, *Persoonia linearis*, *Morinda jasminoides*, *Bidens tripartita*, *Tylophora barbata*, *Marsdenia rostrata*, *Plectranthus parviflorus*, *Smilax australis* (*spinescens*), *Eustrephus latifolius* (*brownii*), *Livistona australis*, *Adiantum formosum* and *Pyrrosia rupestris* (*Polypodium serpens*).

Other East Gippsland species obtained during Mueller's second journey were *Callistemon citrinus* (*lanceolatus*) from Tambo River, *Scaevola ramosissima* (*hispidula*) near Sale, *Agropyron* (*Vulpia*) *pectinatum* at Boggy Creek, and *Tristania laurina* 'along rivers'. *Pteris umbrosa* and *Caustis flexuosa* appeared in the second systematic list, but the specimens concerned are not available to provide locality data; *Acacia kybeanensis* was collected near the Cobberas, and *Pomaderris discolor* and *Pteris vittata* (*longifolia*) near Bruthen and at Buchan respectively, but were not recorded in the list.

Mueller's third journey, in early 1855, was concerned mainly with the Kosciusko region of New South Wales. Afterwards, he travelled south through Wulgulmerang and Buchan, but did very little collecting on the way. He then visited the 'Palm Tree Country' again and, amongst specimens collected in the Orbost district were *Baeckea virgata* (*Camphoromyrtis pluriflora*), *Lysimachia salicifolia* (*vulgaris*), *Notelaea longifolia* (*venosa*) and *Libertia* (*Sisyrrinchium*) *paniculata*. *Ripogonum album*, collected there on the second or third journey, appeared in the fourth systematic list of 1858. Returning westward along the coast, Mueller collected *Acronychia laevis* (*laurina*), *Bossiaea heterophylla*, *Muellerina* (*Phrygilanthus*) *celastroides*, *Olearia* (*Eurybia*, *Aster*) *viscosa* and *Geitonoplesium cymosum*, in the vicinity of the Gippsland Lakes.

In September 1860, Mueller went by sea to Twofold Bay, from which he travelled overland to Genoa, thence to Mallacoota and Cape Howe. He then ascended the Genoa River valley to Nungatta, and from there returned to Twofold Bay. The Genoa-Mallacoota track passed over the shoulder of Genoa Peak, in which area Mueller collected *Pomaderris lanigera* (*P. ferruginea* var. *pubescens*) and *Leptomeria acida* (neither of which is in the sixth systematic list), and *Patersonia glabrata*. The 'Entrance of the Genoa River' (= Mallacoota) yielded *Spyridium cinereum* (*Cryptandra obcordata*) (not in the sixth list), *Melaleuca armillaris*, *Angophora floribunda* (*intermedia*) and *Persoonia levis* (*salicina*, *lanceolata*). From 'abreast of Gabo Island' came specimens of *Conospermum taxifolium* and *Helichrysum elatum* (*albicans*).

From the banks of Genoa River, Mueller collected *Hibbertia dentata*, *Phebalium squamulosum* (*Eriostemon lepidotus*), *Commersonia fraseri*, *Dodonaea triquetra*, *Dendrobium speciosum*, *Dendrobium striolatum* (*milligani*), *Leptospermum emarginatum*, *Lepidosperma urophorum* and *Callistemon subulatus* (the last three of which are not in the sixth list). These nine species, and many others which Mueller collected and labelled 'Genoa River', grow together about the mouth of the granitic gorge about two miles upstream from the present township of Genoa, at the point where the old Wangarabell track swung westerly away from the river.

On Nungatta Mountain, Mueller discovered *Telopea oreades* (the Gippsland Waratah) and *Elaeocarpus holopetalus*, both of which he subsequently named.

The Period 1864-1923

In 1864-65, Norman Taylor carried out a geological reconnaissance of East Gippsland, working for some time in the Genoa area and visiting Cann River. He collected botanical specimens for Mueller but lost many of them in a flood at Genoa, and others were left at Cann River and never retrieved (Taylor, 1866). The few specimens which reached the National Herbarium include **Elaeocarpus holopetalus* from 'Drummers Creek track to Mt. Cann', and *Caustis flexuosa* from 'Canns River'.

In 1869-71, Charles Walter, who was employed by Mueller as a collector, accompanied the geodetic survey party which established beacons on prominent peaks in East Gippsland. In the Howe Ranges he found *Eucryphia moorei* and *Schellhammera undulata* (which appear in Mueller's seventh systematic list of 1874), and he discovered *Prostanthera walteri* on Mount Ellery, which species Mueller named in his honour. Besides these, Walter authenticated some of Mueller's premature records by collecting **Adiantum hispidulum* in the Howe Ranges, and **Oxylobium ilicifolium (trilobatum)* and **Glossodia minor* near Genoa. A specimen labelled by Mueller **Goodenia barbata* ('Genoa and Howe Ranges') without other data, was probably from Walter.

Mainly from 1879 to 1884, A. W. Howitt gathered botanical data, often through police officers working in East Gippsland. He provided specimens of *Hibbertia pedunculata* and **Acacia boormanii (linearis)* from the Snowy River near Deddick, and **Hierochloa rariflora* from Bonang.

At this stage a key and census of Victorian plants was published (Mueller, 1886, 1888), containing species recorded to date as well as many species prematurely or erroneously recorded for the state. However, much of Howitt's material Mueller did not study, but stored with other specimens he could not cope with. So it accumulated, and some discoveries made by Howitt and his associates were not brought to light until very recently. These included specimens of *Helichrysum adnatum* and *Pultenaea subspicata* from the Wulgulmerang-Deddick area. Howitt also provided specimens of *Pomaderris pauciflora* from Tubbut.

Later, Howitt made a study of the eucalypts of Gippsland (Howitt, 1891), amongst which he recorded *E. bosistoana* from Nicholson River and *E. maidenii* from Metung.

In the 1880s, a network of mining tracks was cut throughout East Gippsland, so that access was about equal to that provided today by Forests Commission access roads. About 1887-89, Edwin Merrall made use of such tracks to investigate the Delegate and Bemm River areas (Merrall, 1888). Amongst his botanical material were the first truly Victorian specimens of **Acacia subporosa* ('near Mount Ellery'), **Telopea oreades* ('head of Delegate River') and **Gahnia melanocarpa* ('most eastern Gippsland').

In the summer of 1888-89, Baldwin Spencer led an excursion into the area between Orbost and Bendoc and the natural history was described (Spencer and French, 1889). The large 'gebung' in the 'subtropical jungle' near Goonmirk Range was the recently described *Persoonia silvatica*.

While stationed in East Gippsland, between 1911 and 1918, Rev. A. J. Maher collected **Baeckea linifolia* and *Dendrophthoe vitellina* at Mallacoota. **Goodea stelligera* at Genoa, and *Solanum violaceum* at Mount Drummer.

T. S. Hart, Principal, Bairnsdale School of Mines, wrote an account of the vegetation of the Bairnsdale-Gippsland Lakes area, in which were authentic Victorian records of *Thryptomene micrantha*, **Isopogon anemonifolius* and **Beyeria lasiocarpa*. (Hart 1923).

The Period 1935-1950

While on the staff of the Orbost High School, from 1935 to 1937, F. Robbins collected extensively in East Gippsland. He discovered *Cyathea leichhardtiana* and **Lastreopsis microsora* (*Aspidium tenerum*) at Mount Drummer; *Cryptostylis erecta*, *Galium binifolium* and **Leucopogon esquamatus* at Marlo; **Pomaderris ligustrina*, *P. costata* and *Korthalsella japonica* near Orbost; *Brachycome petrophila* and *Dillwynia prostrata* at Wulgulmerang; and *Galium liratum* at Nowa Nowa.

W. Hunter, a surveyor of Bairnsdale, studied the East Gippsland flora, mainly in the 1930s and 1940s. He contributed Victorian specimens of *Thysanotus junceus* and *Persoonia lucida* from near Genoa, *Chloris ventricosa* and **Glossogyne tenuifolia* from Suggan Buggan, *Helichrysum argophyllum* and *Acacia silvestris* from Nowa Nowa, *Pomaderris pallida* and **Sorghum leiocladum* (*plunosum*) from Ingegoodbee, **Myoporum* (*Disoon*) *floribundum* from Deddick, **Leucopogon pilibundus* (*microphyllus*) from Bonang, and *Acacia maidenii* from Newmerella. At Marlo he discovered *Cryptostylis hunterana*, which was named in his honour. Hunter (1941) published an account of the flora of Suggan Buggan, part of the rain-shadow area of the upper (Victorian) Snowy River valley.

Between 1938 and 1950, N. A. Wakefield substantiated premature records of Mueller's and added other East Gippsland species to the known flora of Victoria by collecting the following:

**Ficus coronata* (*aspera*), **Eucalyptus pilularis* and *Olearia dentata* from the Howe Ranges; **Cyathochaeta diandra* from Mallacoota; **Sticherus* (*Gleichenia*) *flabellatus*, *Asplenium falcatum*, *Lastreopsis decomposita*, *Seirpus forsythii*, *Prasophyllum appendiculatum* and *Pterostylis baptistii* from the Genoa area; *Lycopodium carolinianum*, *Danthonia paradoxa*, *Panicum fulgidum*, *Lepidosperma limicola*, *Lepyrodia anarthria*, *Xyris juncea* and *Thelymitra cyanea* from Maramingo Ck; *Paterstonia longifolia*, **Casuarina nana*, **Persoonia myrtilloides*, **Pultenaea altissima* (*flexilis*), *Pomaderris sericea*, *Pomaderris cotoneaster* and *Hibbertia diffusa* from the upper Genoa R.; *Stylidium laricifolium* from Wangan Inlet; **Hakea dactyloides*, **Daviesia wyattiana*, *Gompholobium glabratum*, *Pomaderris andromedifolia* and **Pomaderris ledifolia* from Mount Kaye; *Athyrium japonicum* and *Deyeuxia microseta* from Combienbar; **Deyeuxia gunniana* (*breviglumis*) and *Thelymitra resecta* from the upper Delegate R.; *Pterostylis reflexa* from Mount Raymond; *Leucopogon riparia*, *Hibbertia spathulata*, *Brachycome riparia* and *Asperula ambleia* from the lower Snowy R.; *Poa saxicola* from the Cobberas Mountains; *Polystichum formosum* from Deadcock Ck; and *Eragrostis trachycarpa* and *Cyperus polystachyos* from Providence Ponds.

Examples of warm-temperate rainforests were described and summaries given of the fern-flora and of the orchids of East Gippsland (Wakefield, 1944a, 1944b, 1950a, 1953). Series of taxonomic papers were published in the *Victorian Naturalist*, from 1939 to 1944 on pteridophytes and from 1951 to 1957 on flowering plants, and the type specimens of 30 of the new species described, including 10 in the genus *Pomaderris*, were from East Gippsland collections.

Miscellaneous Records

Other contributions relevant to this summary are as follow:

W. Sayer. *Xanthorrhoea resinosa*, 'Beyond Orbost', 1887.

W. Bauerlen. *Acacia obtusifolia*, Mount Drummer, 1887.

H. Foster. *Clematis glycinoides*, lower Snowy R., 1889.

- J. St. E. D'Alton. *Marsdenia flavescens*, Lakes Entrance, 1890.
 J. Cameron. *Olox stricta*, lower Cann R., 1895; *Alectryon subcinereus* (*Cupania xylocarpa*), Genoa, 1915.
 R. P. Cameron. *Eupomatia laurina* and *Plectorrhiza tridentata*, Orbost, 1895; *Sarcochilus falcatus*, Cann River, 1895.
 C. H. Grove. *Rubus hillii* (*moluccanus*) and *Pultenaea amoena*, Newmerella, ca 1895.
 E. E. Pescott. *Pteris umbrosa*, Orbost, and *Leptospermum attenuatum*, Cape Conran, ca 1900.
 A. D. Hardy. *Eucalyptus fastigata*, 'Gippsland', 1912.
 H. B. Williamson. *Schoenus imberbis*, Spermwhale Head, date ?
 A. H. Archibald. *Pittosporum revolutum*, Gipsy Point, 1928.
 V. & B. Miller. *Scutellaria mollis*, *Prasophyllum rogersii* and *Trema aspera*, Mallacoota, 1930.
 A. Birch. *Desmodium brachypodium* and *Pultenaea viscosa*, near Wentworth R., ca 1930.
 E. K. Turner. *Notothixos subaureus*, Mallacoota, 1935.
 J. H. Willis. *Logania pusilla*, Mallacoota, and *Hibbertia rufa*, near Cann River, 1948.
 L. Hodge. *Westringia cremnophila* and *Boronia ledifolia*, Snowy R. gorges, ca 1950.
 E. V. Barton. *Prasophyllum viride*, Mallacoota, 1960.
 K. C. Rogers. *Acacia lucasii* and *Monotoca rotundifolia*, Nunniong Plateau, 1964.

Addendum

Carr (1962) provided evidence that Mueller's route to the Mount Hotham area in 1854 was most likely by way of the headwaters of the Dargo River, not by way of Cobungra as suggested by Wakefield (1950). In discussing this matter, Carr made these statements:

Wakefield (1949) following a suggestion made by Barnard (1904) showed that . . . Mt. Latrobe can be identified at Mt. Loch and Mt. Hotham as Mt. Feathertop. Wakefield, relying on an old, very inaccurate sketch plan . . . dated 1864, and perhaps misled by the mention of the Mitta Mitta (actually the West Kiewa R.) assumed that Mueller crossed the Divide near the site of the present Cobungra settlement.

These statements are not in accordance with the references cited, and the 1949 is an error for 1950.

Barnard (loc. cit.) concluded that Mueller 'instead of ascending Feathertop and naming it Hotham, really ascended our Bogong and bestowed that name (Hotham) upon it, while his Latrobe is either Mt. Wills . . . or Mt. Nelson'. Wakefield (1950) stated that 'these contentions cannot be supported' and reached the conclusion that Mt. Feathertop is Mueller's 'Hotham' and Mt. Loch is Mueller's 'Latrobe'.

Wakefield (loc. cit.) published an accurate map compiled from modern topographical plans, with a small sketch inset at a corner, and the text indicated the source of the sketch and that it was presented to illustrate the application, in 1864, of certain place names. Wakefield stated that the stream which Mueller referred to as the upper Mitta was 'certainly the west branch of the Kiewa River'.

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